

Application No.: 10/820,025
Amendment under 37 CFR 1.116
Reply to Office Action dated May 15, 2009
August 17, 2009

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claims 1-2 (Cancelled):

Claim 3 (Currently amended): A method for making a conductive electroless plated powder comprising the steps of:

(I) allowing core particles which have a noble metal ion-capturing ability to capture noble metal ions, and reducing the noble metal ions so that the surfaces of the core particles support a noble metal;

(II) adding a slurry, which includes the core particles prepared by said step of (I) ~~allowing core particles, into~~ , to an aqueous medium comprising an initial thin-film-forming solution containing nickel ions, a reducing agent, and a complexing agent comprising an organic carboxylic acid or a salt thereof to prepare an aqueous suspension, dispersing the core particles in the initial thin film-forming solution, and reducing the nickel ions to form a nickel initial thin film on the surface of the core particles; and

(III) adding a first solution, which contains a nickel ion-containing solution and the complexing agent, and a second solution,

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which contains a reducing agent-containing solution, to the aqueous suspension individually and simultaneously, the aqueous suspension containing the core particles having the initial thin film on the surface thereof so as to perform electroless plating and so that grainless boundaries are recognized in cross section in a direction of a thickness of the nickel film.

Claim 4 (Original): The method according to claim 3, further comprising at least one of the steps of: adjusting the amounts of said nickel ion-containing solution added and said reducing agent-containing solution added, adjusting the initial concentration of said complexing agent in said aqueous suspension, and adjusting the concentration of said complexing agent in said nickel ion-containing solution, so as to maintain the concentration of said complexing agent in said aqueous suspension in the range of 0.005 to 6 moles/l in said step (III).

Claim 5 (Original): The method according to claim 4, further comprising the step of using at least one of tartaric acid and a salt thereof as the complexing agent.

Claim 6 (Cancelled):

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Claim 7 (Previously presented): The method according to claim 5, further comprising the step of using, before said step (III), a ratio of the sum of the surface areas of said core particles contained in said aqueous suspension to the volume of said aqueous suspension between 0.1 to 15 m²/l.

Claim 8 (Cancelled):

Claim 9 (Previously presented): The method according to claim 4, further comprising the step of using, before said step (III), a ratio of the sum of the surface areas of the core particles contained in the aqueous suspension to the volume of the aqueous suspension between 0.1 to 15 m²/l.

Claim 10 (Original): The method according to claim 3, further comprising the step of using at least one of tartaric acid and a salt thereof as the complexing agent.

Claim 11 (Cancelled):

Claim 12 (Previously presented): The method according to claim 10, further comprising the step of using, before said step (III), a ratio of the sum of the surface areas of the core particles contained

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in the aqueous suspension to the volume of the aqueous suspension between 0.1 to 15 m²/l.

Claim 13 (Cancelled):

Claim 14 (Previously presented): The method according to claim 3, further comprising the step of using, before the step (III), a ratio of the sum of the surface areas of the core particles contained in said aqueous suspension to the volume of said aqueous suspension between 0.1 to 15 m²/l.

Claim 15 (Original): The method according to claim 3, further comprising the step of imparting the noble metal ion-capturing ability to the core particles by a surface treatment.

Claims 16-19 (Cancelled):

Claim 20 (Currently amended): A method for making a conductive electroless plated powder comprising the steps of:

(I) allowing core particles which have a noble metal ion-capturing ability to capture noble metal ions, and reducing the noble metal ions so that the surfaces of the core particles support a noble metal;

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(II) adding a slurry, which includes the core particles prepared by said step of (I) ~~allowing core particles, into~~ , to an aqueous medium comprising an initial thin-film-forming solution containing 1) nickel ions, 2) a reducing agent including one of sodium hypophosphite, sodium borohydride, potassium borohydride, dimethylamine borane, hydrazine and formalin, and 3) a complexing agent comprising an organic carboxylic acid or a salt thereof to prepare an aqueous suspension, dispersing the core particles in the initial thin film-forming solution, and wherein said step of dispersing the core particles in the aqueous medium includes adjusting the reducing agent in the initial thin film-forming solution in the range between 4×10^{-4} and 2.0 mol/l so that the nickel ions are reduced to form initial thin nickel film on a surface of each of the core particles; and

(III) adding a first solution, which contains a nickel ion-containing solution and the complexing agent, and a second solution, which contains a reducing agent-containing solution, to the aqueous suspension individually and simultaneously, the aqueous suspension containing the core particles having the initial thin film on the surface thereof so as to perform electroless plating and so that grainless boundaries are recognized in cross section in a direction of a thickness of the nickel film.

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Claim 21 (Currently amended): The method according to claim 20, wherein said step of adding a slurry, which includes the core particles prepared by said step of (I) ~~allowing core particles, into~~ to an aqueous medium comprising an initial thin film-forming solution includes adjusting the reducing agent in the initial thin film-forming solution in the range between 2.0×10^{-3} and 0.2 mol/l.

Claim 22 (Previously presented): The method according to claim 20, further comprising the step of (IV) forming a gold plating layer as a top layer on the nickel film.